## 香港新记录的10个分类单元

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摘要:香港位于热带北缘,其植被在历史上曾遭到大规模破坏,近几十年来逐渐恢复。香港植物标本采集有很长历史,迄今已记录超过 2 170 种维管植物,但是新种和新分布仍在不断增加。在最近的野外工作中我们发现 10 种在香港新记录到的维管植物,包括 3 个新分布属,分别是:雷公连属 (Amydrium Schott)、山黑豆属 (Dumasia DC.)和假福王草属 (Paraprenanthes C. C. Chang ex C. Shih);新分布的种分别是:唇边书带蕨 (Vittaria elongata Sw.)、雷公连 [Amydrium sinense (Engl.) H. Li],百足藤[Pothos repens (Lour.) Druce]、四川轮环藤 (Cyclea sutchuenensis Gagnep.)、山黑豆 (Dumasia truncata Siebold & Zucc.)、倒心叶珊瑚 [Aucuba obcordata (Rehder) Fu ex W. K. Hu et Soong]、竹叶榕 (Ficus stenophylla Hemsl.)、长叶冠毛榕 [Ficus gasparriniana var. esquirolii (H.Lév. & Vaniot) Corner]、硬叶冬青(Ilex ficifolia C. J. Tseng ex S. K. Chen et Y. X. Feng)以及假福王草 [Paraprenanthes sororia (Miq.) C. Shih.]。

关键词:新分布,维管植物,植物区系,保护,生物多样性

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# Ten newly recorded taxa to the flora of Hong Kong

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Abstract: Hong Kong, located at the coast of Guangdong and the fringe of tropics, has a long history of botanical exploration. More than 2 170 native vascular plant species have been recorded in its territories. Nonetheless, taxa new to science and new records of plants are still being discovered and described. In recent field trips, we found 10 new records of vascular plants to this region, including three newly recorded genera. The newly recorded genera are Amydrium Schott, Dumasia DC. and Paraprenanthes C. C. Chang ex C. Shih. The newly recorded species or varieties are Vittaria elongata Sw., Amydrium sinense (Engl.) H. Li, Pothos repens (Lour.) Druce, Cyclea sutchuenensis Gagnep., Dumasia truncata Siebold & Zucc., Aucuba obcordata (Rehder) Fu ex W. K. Hu et Soong, Ficus stenophylla Hemsl., Ficus gasparriniana var. esquirolii (H.Lév. & Vaniot) Corner, Ilex ficifolia C. J. Tseng ex S. K. Chen et Y. X. Feng and Paraprenanthes sororia (Miq.) C.Shih.

Key words: new records, vascular plants, flora, conservation, biodiversity

Hong Kong (HK), located at the southern coast of Guangdong province, lies between 22°08'-22°35' N and 113°49'-114°31' E, with the highest peak Tai Mo Shan 957m above sea level. The total land area is about 1 105.7 km², including more than 260 islands (Hong Kong Government, 2017). Although well known as a metropolis, only less than 25% of its land has been developed, and about 78.7% of its area is covered by vegetation. It has a subtropical monsoon climate, and the mean annual rainfall ranges from 1 600 to 3 000 mm (Hong Kong Observatory, 2017). Complex topography, warm climate and the remarkable variation of precipitation have fostered a diverse flora in this region.

Hong Kong lies at the northeast corner of the Indo-Burma Biodiversity Hotspot (Myers et al,

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2000) and is rich in plant species. The original vegetation is evergreen or semi-evergreen forest (Zhuang & Corlett, 1997, Xing et al, 1999), but it was largely destroyed in the past centuries and almost clear-cut during the Japanese Occupation (1942-1945) with less than 1% forest cover remaining on Hong Kong's highest mountain Tai Mo Shan (Zhuang & Corlett, 1997, Abbas et al, 2016). Since then, secondary forest slowly expanded from extremely small remnant forest patches and isolated trees in remote ravines, leading to a gradual increase in forest cover over the last 70 years (Abbas et al, 2016). According to a recent land-survey, woodland accounted for 24.9%, shrubland for 23.6% and grassland for 17.3% of the total land area (Hong Kong Planning Department, 2017).

Botanical studies have a long history in Hong Kong. As early as in 1816, C. Abel collected herbarium specimens from Hong Kong Island (Xing et al., 1999). Since 1841, a number of wellknown collectors carried out botanical collection in this region (Hong Kong Herbarium, 2017). In 1857, the Flora of the Island of Hongkong, one of the earliest plant accounts of Hong Kong written by B.C. Seemann was published, in which 773 plant species were recorded (Seemann, 1857). In 1861, Flora Hongkongensis, the first flora of Hong Kong and also the first modern flora for Southeast Asia, was published by George Bentham, and 1 056 taxa of vascular plants were included (Bentham, 1861). Although a number of botanists including Prof. Hu Shiu-Ying collected specimens for decades after World War II, the flora remained largely under-explored. Prof. Xing Fu-Wu collected 3 500 specimens from 1996 to 1998 and together with the previously collected voucher specimens, he identified 1 884 species of native seed plants, belonging to 876 genera, of which 106 species were new records for Hong Kong (Xing et al. 1999). In 2011, AFCD (Agriculture, Fisheries and Conservation Department, Government of the Hong Kong SAR) published the Flora of Hong Kong in four volumes. According to the latest Check List of Hong Kong Plants, the number of native vascular plants species and varieties increased to 2 175 (Hong Kong Herbarium, 2012).

Although botanical studies in Hong Kong have a long history, it seems the plant diversity is still under-explored. Species new to science are still being described from this region, for example, *Syzygium impressum* (Xia et al, 2008), *Carpinus insularis* (Tong et al, 2014), *Gastrochilus kadooriei* (Kumar et al, 2014), *Thismia hongkongensis* (Mar & Saunders, 2015), and new records (eg. Yan et al, 2006, Gale et al, 2013) are continuously being reported.

During recent plant exploration trips in remote parts of Hong Kong, we found 10 newly recorded taxa, including three newly recorded genera to Hong Kong. The voucher specimens are deposited in Kadoorie Farm & Botanic Garden Herbarium (KFBG). This article aims to report these discoveries.

# New records to Hong Kong

#### 1 Pteridaceae

**1.1 Vittaria elongata** Sw. (Fig. 1-A) In Syn. Fil. 109, 302. 1806; ——*Haplopteris elongata* (Swartz) E. H. Crane in Syst. Bot. 22: 514. 1998; FRPS, 3 (2): 25, pl. 7: 1:4; FOC, 2-3: 255.

**Distribution:** China (Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Taiwan, Tibet, Yunnan), Australia, Indonesia, Japan, Laos, Madagascar, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Vietnam.

**Ecology:** Epiphytic on tree trunks or growing on the shady and moist side of rocks, shade tolerant.

**Specimens Seen:** China. Hong Kong, New Territories, Ma On Shan, Luk Chau Shan, on the moist side of rocks, alt. 403m, 4 March 2017, (Liu Jin-Gang, JG0212, KFBG).

**Notes:** Fern, epiphytic or epilithic. Rhizome long, creeping. Fronds clustered, drooping; lamina leathery, ribbon-like, up to 1m long. Soral line marginal, immersed in deep groove, open outward.

It differs from *V. flexuosa* (Fée) E. H. Crane by having much longer lamina, and marginal soral line immersed in groove. *V. flexuosa* has been recorded as early as 1912 in Hong Kong and is common, while *V. elongate* is rare. We only found about ten small clumps scattered among the Luk Chau Shan rock jungle, growing with *Asplenium crinicaule* Hance.

#### 2 Araceae

**2.1 Amydrium sinense** (Engl.) H. Li. (Fig. 1-B) in FRPS, 13(2): 23, pl. 4: 8–10. 1979; FOC, 23: 10, 2010; —— *Scindapsus sinensis* Engl. in Engl., Bot. Jahrb. 29: 234. 1900;

**Distribution:** China (Hubei, Hunan, Hong Kong, Guangxi, Guangdong, Guizhou, Sichuan, Yunnan), Vietnam.

**Ecology:** Growing upon or attached to trees or rocks, shade tolerant. Flowering in June-July, fruiting in July-November.

**Specimens Seen:** China. Hong Kong, New Territories, Tai Po, Ng Tung Chai, next to the Main Fall, alt. 472 m, 14 July 2017, (Zhang Jin-Long & Zhu Hui-Ling etc, JL1194, KFBG).

**Notes**: Herbaceous liana. Stem slender, climbing on rocks through fleshy aerial roots. Leaves distantly arranged, falcate-lanceolate,  $13-23 \times 5-8$  cm, base subrounded, margin entire, apex acute; adaxially bright green, abaxially yellowish green. Petiole base sheathing.

Amydrium is a newly recorded genus to Hong Kong. There are five species in this genus, in which two have been found in South China. A. hainanense, another species reported from South China, differs from this species in having round to oval perforations on both sides along midrib.

**2.2 Pothos repens** (Lour.) Druce (Fig. 1-C) in Rept. Bot. Exch. Club. Brit. Isles. 4: 641. 1917; FRPS, 13(2): 20, pl. 3: 9. 1979; FOC, 23: 8, 2010; FGD, 9: 180, 2009; FHN, 4: 130, fig. 1034, 1977.

Distribution: China (Guangdong, Guangxi, Hainan, Hong Kong, Yunnan), Laos, Vietnam.

**Ecology:** Climbing on trees or creeping over rocks in moist forests. Flowering in March-April, fruiting in May-July.

**Specimens Seen:** China. Hong Kong, New Territories, Lantau Island, Tai O, alt. 38 m (07 September 2017, Craig Williams, CW0530, KFBG).

**Notes**: Epiphytic lianas, more than 10m long. Stem angulate. Phyllode ca.13-15 cm×1 cm; leaf blade lanceolate, 3-5 cm×1 cm; primary veins on leaf blade and phyllode, parallel. Leaves on young shoots much smaller and petioles elliptical. Spadix cylindric. This species differs from *Pothos chinensis* (Raf.) Merr. in having much longer phyllode, 3-4 times longer than leaf blade.

### 3 Menispermaceae

**3.1 Cyclea sutchuenensis** Gagnep. (Fig. 1-D, E, F) in Bull. Soc. Bot. France 55: 37, 1908; Diels in Engler, Pflanzenreich IV. 94: 319, 1910; FRPS 30(1): 75, pl. 16: 6-11, 1996; FOC 7: 28, 2008; FGD 1: 45, fig. 45, 1987.

**Distribution:** China (Guangdong, Guangxi, Guizhou, Hong Kong, Hubei, Hunan, Sichuan, Yunnan).

**Ecology:** Forests, forest margins, shrublands. Flowering in early summer and fruiting in autumn.

**Specimens Seen:** China. Hong Kong, New Territories, Lantau Island, Wong Lung Hang Country Trail, alt. 604 m, (10 January 2017, Zhang Jin-Long & Zhu Hui-Ling, JL1085, KFBG); the same location, (11 May 2017, Liu Jin-Gang, JG0293, KFBG).

**Notes**: Vines, glabrous, sometimes bracts pubescent, leaf blade lanceolate,  $5-15 \times 2-5.5$  cm, thinly leathery or papery, with 3-5 palmate veines, base rounded. Male flowers: sepals 4 or 5, connate at base. This species differs from *C. hypoglauca* (Schauer) Diels in having a lanceolate leaf blade and larger endocarp.

#### 4 Fabaceae

**4.1 Dumasia truncata** Siebold & Zucc. (Fig. 1-G) in Abh. Akad. Wiss. Monchen 4(2): 119. 1843; FRPS 41: 253, 1995; FOC 10: 243, 2010;

**Distribution:** China (Anhui, Fujian, Taiwan, Guangdong, Guangxi, Henan, Hong Kong, Hunan, Hubei, Jiangxi, Shaanxi, Zhejiang), Japan, Korea.

**Ecology:** Mountain slope, forest margins or streamsides, understorey. Flowering in August-September, fruiting in October-November.

**Specimens Seen:** China. Hong Kong, New Territories, Tai Po, Ng Tung Chai, between the Main Fall and Scatter Fall, alt. 472 m (14 July 2017, Zhang Jin-Long & Zhu Hui-Ling etc., JL1195, KFBG)

**Notes**: Perennial twining herbs, glabrous. The shape of leaflet is similar to *D. hirsuta*, but the

latter can be easily distinguished by hirsute stems and petioles (Pan, 2010). Only a very small population with less than five individuals along the hiking trail from Ng Tung Chai to Tai Mo Shan was observed in Hong Kong. *Dumasia* is a newly recorded genus to HK.

## 5 Garryaceae

**5.1 Aucuba obcordata** (Rehder) Fu ex W. K. Hu et Soong. (Fig. 2-A) in Name list Pl. Hupei. 166. 1964; Flora Sichuanica 1: 395. pl.149: 6-8, 1981; FRPS, 56:19, 1990; FOC, 14: 226, 2005.

**Distribution:** China (Guangdong, Guangxi, Guizhou, Hong Kong, Hubei, Hunan, Shaanxi, Sichuan, Yunnan).

**Ecology:** Forests, in shady and moist habitat. Flowering in March–April and fruiting in September– November.

**Specimens Seen:** China. Hong Kong, New Territories, Tai Po, Tai Mo Shan, Tai Shing Stream, alt. 695 m. (21 January 2017, Hang King-Yeung, HKY0057, KFBG).

**Notes**: Shrubs or small trees. Leaves obcordate or obovate, (4-) 8–14 × (2-) 4.5–8 cm, thickly papery to subleathery, base narrowly cuneate, margin coarsely dentate, sinuate between teeth, apex truncate or obcordate. This species could be easily distinguished from *A. chinensis* Benth, another species found in Hong Kong, by the shape of apex.

### 6 Moraceae

**6.1 Ficus stenophylla** Hemsl. (Fig. 2-B) in Hook. Icon. Pl. 26: t. 2536. 1897. FHN, 2: 397. 1965; FGD, 1:207, fig. 234, 1987; FRPS, 23(1): 151, pl. 37: 1-4 1998; FOC, 5: 58, 2003.

**Distribution:** China (Fujian, Taiwan, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Hubei, Hunan, Jiangxi, Yunnan, Zhejiang), Laos, Thailand, Vietnam.

**Ecology:** Forest, mountain valleys. Flowering and fruiting in May-January of the next year.

**Specimens Seen:** China. Hong Kong, New Territories, Wang Shan Keuk Ha Tsuen to Luk Keng, alt. 258.5 m, (06 December 2016, Zhang Jin-Long, JL0990, KFBG); Hong Kong Island, Mount Parker, 365 m, (14 December 2016, Liu Jin-Gang, JG0454, KFBG); Hong Kong Island, Mount Parker, (02 September 2008, Y. W. Lam, HK0043963, HK).

**Notes**: Shrubs. This species is similar to *Ficus variolosa* Lindl. ex Benth., but differs in having thin papery leaves and the blades are usually much narrower.

**6.2 Ficus gasparriniana** var. **esquirolii** (H.Lév. & Vaniot) Corner (Fig. 2-C) in Gard. Bull. Sing. 17: 428, 1959; FRPS, 23(1): 145, pl. 34: 6, 1998; FOC, 5:57, 2003.

**Distribution:** Guangdong, Guangxi, Guizhou, Hong Kong, Hunan, Jiangxi, Sichuan, Yunnan **Ecology:** Along hiking trails in forest margin. Understorey or growing in shrubland on the mountain ridge. Flowering in May – July.

**Specimens seen:** China. Hong Kong, New Territories, Ma On Shan, Wong Chuk Yeung; Along MacLehose Trail Section IV, on forest margin, alt. 246 m. (22 September 2016, Zhang Jin-Long, JL0707, KFBG); Ma On Shan, Wong Chuk Yeung, (28 April 2005, P. Chow, HK0044009, HK).

**Notes:** Although this taxon has been identified as *Ficus gasparriniana* var. *esquirolii*, but it is closer to the type specimen of *Ficus cehengensis* S. S. Chang (Cao Z.Y., 766, PE00024116, PE00024117, PE). Here we adopted the treatment of *Flora of China*, where *Ficus cehengensis* has been treated as a synonym of *Ficus gasparriniana* var. *esquirolii*. The fruits of our specimens are globose and tubercular. This variety is similar to *Ficus stenophylla* Hemsl., but leaves are 3-4 times broader, fruits are tubercular and attached to the stem with relatively robust pedicel. In comparison, the exocarp of *F. stenophylla* is almost smooth. Further investigation might be needed to clarify the identity of this taxon.

## 7 Aquifoliaceae

**7.1 Ilex ficifolia** C. J. Tseng ex S. K. Chen et Y. X. Feng (Fig. 2-D) in Acta Phytotax. Sin. 37 (2): 143, 1999; FRPS, 45(2):34, pl. 6: 6-9, 1999; FOC, 11:378, 2008; —— *Ilex ficifolia* C.J. Tseng in J. Xiamen Univ. Nat. Sci. 9(4): 306, f. 3, 1962, nom. invalidum, Sec. ICBN (1994).

**Distribution:** China (Fujian, Guangdong, Guangxi, Hong Kong, Hunan, Jiangxi, Zhejiang). **Ecology:** In woodland. Flowering in May-June, fruiting in September-November.

**Specimens Seen:** China. Hong Kong, New Territories, Lantau Island, Ngong Ping 360 Rescue Trail, alt. 425 m. (13 October 2016, Zhang Jin-Long, JL0764, KFBG).

**Notes**: Trees or shrubs. Leaf blade elliptic or oblong-elliptic, glabrous, margin sparsely and inconspicuously serrulate. Peduncles longer than pedicels. This species is similar to *I. suaveolens* (H. Lév.) Loes., but it differs in having shorter peduncles and shiny leaves.

#### 8 Asteraceae

**8.1 Paraprenanthes sororia** (Miq.) C.Shih. (Fig. 2-E, F, G) in Acta Phytotax. Sin. 26: 422. 1988; FOC, 21: 228, 2011. ——*Paraprenanthes pilipes* (Migo) Shih in Act. Phytotax. Sin. 26: 424. 1988; FRPS, 80(1): 181, 1997; ——*Prenanthes pilipes* (Migo) Y. R. Ling, FGD, 8: 266, 2007.

**Distribution:** China (Anhui, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang), Japan, South Korea, Vietnam.

**Ecology:** Roadsides, mountain slopes, shrublands, valleys, understorey of forests. Flowering and fruiting in May- August.

**Specimens Seen:** China. Hong Kong, New Territories, Tai Po, Tai Mo Shan, along the trail between Ng Tung Chai and the pavilion beside Tai Mo Shan Forest Track. In open habitat close to stream. (27 May 2017, Liu Jin-Gang & Hang King-Yeung, JG0301, KFBG)

**Notes**: This is the most widespread species in this genus. The specimen we seen has glandular hairs on stem. It was identified as *P. pilipes* by following the keys in FRPS, but *P. pilipes* was treated as a synonym of *P. sororia* in *Flora of China*. Only a small population was observed on Tai Mo Shan near Kadoorie Farm and Botanic Garden. *Paraprenanthes* is a newly recorded genus to HK.

注: A. 唇边书带蕨 Vittaria elongata Sw. (摄影: 刘金刚); B. 雷公连 Amydrium sinense (Engl.) H. Li (摄影: 张金龙); C. 百足藤 Pothos repens (Lour.) Druce (摄影: 黄世芳); D, E, F. 四川轮环藤 Cyclea sutchuenensis Gagnep. (D. 摄影: 朱慧玲; E, F. 摄影: 刘金刚); G. 山黑豆 Dumasia truncata Siebold & Zucc. (摄影: 张金龙).

Note: A. Vittaria elongata Sw. (photo by LIU Jin-Gang); B. Amydrium sinense (Engl.) H. Li (photo by ZHANG Jin-Long); C. Pothos repens (Lour.) Druce (photo by WONG Sai-Fong); D, E, F. Cyclea sutchuenensis Gagnep. (D: photo by ZHU Hui-Ling; E, F: photo by LIU Jin-Gang); G. Dumasia truncata Siebold & Zucc. (photo by ZHANG Jin-Long).

图 1 香港新记录的分类单元 1-5 Fig. 1 The newly recorded taxa to Hong Kong 1-5 注: A. 倒心叶珊瑚 Aucuba obcordata (Rehder) Fu ex W. K. Hu et Soong (摄影: 刘金刚); B. 竹叶榕 Ficus stenophylla Hemsl. (摄影: 张金龙); C. 长叶冠毛榕 Ficus gasparriniana var. esquirolii (H.Lév. & Vaniot) Corner (摄影: 刘金刚); D. 硬叶冬青 Ilex ficifolia C. J. Tseng ex S. K. Chen et Y. X. Feng (摄影: 张金龙); E-G. 假福王草 Paraprenanthes sororia (Miq.) C.Shih (E, F. 摄影: 刘金刚; G. 摄影: 幸敬阳).

Note: A. Aucuba obcordata (Rehder) Fu ex W. K. Hu et Soong (photo by LIU Jin-Gang); B. Ficus stenophylla Hemsl. (photo by ZHANG Jin-Long); C. Ficus gasparriniana var. esquirolii (H.Lév. & Vaniot) Corner (photo by LIU Jin-Gang); D. Ilex ficifolia C. J. Tseng ex S. K. Chen et Y. X. Feng (photo by ZHANG Jin-Long); E-G. Paraprenanthes sororia (Miq.) C.Shih (E, F: photo by LIU Jin-Gang, G: photo by HANG King-Yeung).

图 2 香港新记录的分类单元 6-10 Fig. 2 The newly recorded taxa to Hong Kong 6-10

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